STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: **Altered Atom** *Agreement #:* **30-076496**

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:

   DNR Northwest Region
   919 North Township Street
   Sedro Woolley, WA 98284
   360-856-3500

   Contact Person: Candace Johnson
   Telephone: 360-856-3500

4. Date checklist prepared: **07/13/2004**

5. Agency requesting checklist: **Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

   a. Auction Date: **01/24/2005**
   b. Planned contract end date (but may be extended): **9/30/2006**
   c. Phasing: **DOES NOT APPLY**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a. Site preparation: **Treatment to be assessed in 2-3 years.**
   b. Regeneration Method: **Hand-plant with conifer seedlings.**
   c. Vegetation Management: **Treatment to be assessed in 3-5 years.**
   d. Thinning: **Treatment to be assessed in 10-15 years.**

   Roads:

   The MZ-ML and MZ-22 roads will continue to be used for future timber sales and forest management activities.

   Rock Pits and/or Sale:

   The MZ-21 hardrock pit will continue to be used for roads on future timber harvests and road maintenance activities.

   Other: **None**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☐*303 (d) – listed water body in WAU:* ☐*temp* ☐*sediment* ☐*completed TMDL (total maximum daily load):*
☐*Landscape plan:*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan:* **Available at DNR Northwest Region office**
☒*Wildlife report:* **Wildlife Biologist Memo available at DNR Northwest Region office**
☐*Geotechnical report:*
☐*Other specialist report(s):*
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☒*Rock pit plan:* **Available at DNR Northwest Region office**
☒*Other:* **State Soil Survey, 1992; Forest Resource Plan & Environmental Impact Statement, July 1992. Habitat Conservation Plan & Environment Impact Statement, September 1997.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known

10. List any government approvals or permits that will be needed for your proposal, if known.

☐*HPA* ☐*Burning permit* ☐*Shoreline permit* ☐*Incidental take permit* ☒*FPA #* _____ ☒*Other:*

None

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description:

Considered Area: Approximately 85 acres of 70- to 80-year-old timber in the West Cascade Western Hemlock Vegetation Zone was considered for harvest. The Altered Atom timber sale proposal contains approximately 75.82 (gross) acres in two units and right of way within the considered area. The unit is bounded by either younger forest stands or riparian or wetland buffers containing timber of similar composition and age. All units are bounded by DNR property.

Sale area: 75.82 proposal acres gross (including leave tree patches, and right of way):
Gross unit acres: 42.85 acres for Unit #1 and 32.66 acres for Unit #2.
72.2 proposal acres net (minus leave tree patches)
Net unit acres (excludes leave tree patches): 41.15 acres for Unit #1 and 31.05 acres for Unit #2.
0.22 acres of external right of way.

Est. Volume: 3,690 mbf

Logging System: Ground-based and cable

Landings: Approximately 10

Roads:

Optional Construction:	**4,205 feet**
Optional Reconstruction:	**6,815feet**
Required Abandonment:	**3,528 feet**
Culverts installed/replaced:	**11 non-fish culverts planned.**

Rock Pits and/or sales: Rock for road construction will be taken from the existing MZ-21 hardrock pit. Development will involve drilling, shooting and processing rock to generate ballast rock.

Special Forest Product Sales: None

Other Related Actions: None

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

Pre-Harvest Stand Description:

- **72- to 78-year-old timber.**
- **130-160 feet tall.**
- **basal areas of approximately 250-300 square feet per acre.**
- **comprised primarily of Douglas-fir (50% by volume).**
- **smaller components of western redcedar (12%), western hemlock (20%), and red alder (10%).**

Type of Harvest:

- **regeneration harvest with 7% legacy retention trees.**
- **ground-based and cable yarding.**

Overall Unit Objectives:

- **Generating revenue for the Forest Board Transfer (Trust 01) and Charitable, Educational, Penal, and Reformatory Institutions (Trust 06).**
- **Protecting water quality; maintaining site productivity, and maintaining wildlife habitat through a legacy tree retention strategy.**
- **This proposal meets or exceeds all of the guidelines and prescriptions set forth in the DNR Habitat Conservation Plan, Forest Resource Plan, and Forest Practices Rules and Regulations.**

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		4,205	1.45	0
Reconstruction		6,815		0
Abandonment		3,528	1.21	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	11			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:

Township 29 North, Range 7 East, Sections 2, 3, and 4
Township 30 North, Range 7 East, Section 34

b. Distance and direction from nearest town (include road names):

The proposal is located four miles southeast of Granite Falls. From Granite Falls, take the Menzel Lake Road south 4.6 miles to a white DNR gate to the east. The sale is located 2.5 miles beyond the gate on the MZ-ML forest road.

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")

Name	*Total Acres*	*Proposal Acres*
Pilchuck Mountain WAU	**41,134**	**75.82**
Sub-basin 6	**2,381**	**51.01**
Sub-basin 9	**2,322**	**24.81**

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)

General Watershed Administrative Unit (WAU) information

Name of WAU	*Acres*	*DNR-Managed Acres*	*Other Acres*	*% DNR-Managed Land*	*% Other Land*	*Proposal Acres*	*% of WAU in Proposal*
Pilchuck Mountain	**42,583**	**28,458**	**14,125**	**67%**	**33%**	**75.82**	**00.19%**

The majority of the land in the WAU is designated for timber resource use, and has been so historically. Mount Pilchuck Natural Resource Conservation Area (NRCA) lies approximately four miles to the east. Mount Pilchuck State Park lies approximately three miles to the east-northeast.

Past and Future DNR Activities in WAU

DNR Managed Lands – Past and Future Harvests within the Pilchuck Mountain WAU
(This proposal is included as part of the estimated acreage for future harvests.) Data from DNR Database 7-15-04

Pilchuck Mountain WAU	*Estimated Acreage Harvested in Past 7 Years*	*Est. Acreage for Future Harvests*	*Total Est. Acreage Past and Future*
WAU Acres	**1,067 even-age, 2,075 uneven-age**	**409 even-age, 161 uneven-age**	**3,712**
% of WAU	**7.6%**	**1.4%**	**9.0%**
% of DNR Acres	**11.1%**	**2.0%**	**13.1%**

DNR land lies mainly in the southeast two-thirds of the Pilchuck Mountain WAU. On DNR-managed lands within the WAU, past activity has included timber harvesting and associated activities – e.g. road building and abandonment, rock pit expansion, and silvicultural work. This proposal is located in the east-central portion of the WAU.

Activities on DNR-managed land will follow Forest Practices Rules, HCP guidelines, and the Forest Resource Plan – policies designed to minimize environmental impacts of forest management activities. Future forest management activities in the WAU include timber harvesting and associated activities. Future harvest acreage includes this proposal and four others currently established or under consideration for fiscal years 2005 and 2006. Approximately 4,500 acres of NRCA land are managed as a natural area by the DNR.

Other Management in WAU

Non-DNR Managed Lands – Past Timber Harvests within Pilchuck Mountain WAU

	Est. Acreage Harvested in Past 7 Years
WAU Acres	**1,953 even-age, 87 uneven-age**
% of WAU	**5.0%**
% of Non-DNR Acres	**15.8%**

On non-DNR lands, private landholdings are mostly in the downstream reaches of the WAU in the west and northwest portions. Washington State Parks manage an estimated 1,300 acres in the central-north portion of the WAU. Timber harvesting on private land is subject to Forest Practices rules and regulations.

Environmentally sensitive conditions occurring within the Pilchuck Mountain WAU include the presence of marbled murrelet detection sites.

Future forest management activities on privately managed, non-DNR lands in WAU will be subject to the Forest Practice Rules.

Proposal Specifics

• A DNR NW Region Wildlife Biologist and Soils/Hydrology Specialist have both visited the proposal to evaluate for habitat, slope stability, and water quality considerations.

• A DNR NW Region Biologist verified that no suitable marbled murrelet habitat blocks currently exist within the boundaries of this proposal. The nearest marbled murrelet habitat and detection sites lie 0.1 miles away.

• Legacy trees were typically clumped to more effectively shelter them from wind effects.

• Riparian and wetland buffers were established according to HCP guidelines, and roads were designed to minimize construction. The right-of-way for roads MZ-24 and MZ-2401 call for about .22 acres of timber to be removed from the WMZ in Unit #1. No other trees are to be removed within the buffer. An additional .22 acres of WMZ was added to the northern part of the WMZ to satisfy Forest Practice guidelines for road building across it. The wetland buffer still kept its original size and protects the wetland after the adjustment.

• Ground-based equipment and roads within the proposal sale area and right-of-way will not cross riparian buffers.

• This proposal is not in the Significant-Rain-on-Snow (SROS) zone, therefore analysis for hydrologically mature forests was not required.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☒Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

Comparison of WAU, Sub Basin, and Proposal Area

	Within Pilchuck WAU	*Within Sub-basins6 and 9*	*Within Proposal Area*
Rainfall Range (Inches per Year)	**40”-100”**	**45”-60”**	**45”-60”**
Elevation (feet)	**277 to 5,302**	**396 to 2,361**	**1,040 to 1,320**
Acres in Rain-on-Snow zone and %	**5,696 (13%)**	**116 (2%)**	**None (All rain-dominated)**
% of area with High soil erosion potential	**13%**	**6% for Sub-basin 6 3% for Sub-basin 9**	**None (Low to Medium)**
% of area with High soil mass wasting potential	**11%**	**0% for Sub-basin 6 0% for Sub-basin 9**	**None (Insignificant to Medium)**

The Pilchuck River divides the Pilchuck Mountain WAU. The WAU has an average of 61 inches annual precipitation. The western portion of the WAU is generally rolling terrain with occasional deep, incised gorges carrying major tributaries. In this portion, elevations vary from 276 to around 1,300 feet above sea level and slopes average 10% to 40%. The central portion of the WAU is a river valley starting at the low elevations and rising through rolling, benchy terrain to steep mountainous terrain. Elevations in this portion range from 900 to 5,302 feet at the summit of Mount Pilchuck. Slopes average 40% to 55% with some in excess of 100%. Some of the tributaries here are also deep incised gorges. The eastern portion becomes increasingly steep though the elevations are lower than Mount Pilchuck.

The WAU contains two major vegetation zones, the Western Hemlock Zone and the Cascade Subalpine Forest Complex. The Western Hemlock Zone occurs in the lower elevations up to around 1,800 feet above sea level, and contains several conifer species such as Douglas-fir, western redcedar and western hemlock. The Cascade Subalpine Forest Complex occurs from 1,800 feet above sea level to the tree line of Mount Pilchuck and contains primarily Pacific silver fir, mountain hemlock and subalpine fir. Red alder, black cottonwood and bigleaf maple can also be found in smaller stands throughout the WAU.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

The proposal lies within the Westside Western Hemlock Zone forest vegetation zone in the rolling western portion of the Pilchuck Mountain WAU. See figure in B-1-a-1 above for more details.

b. What is the steepest slope on the site (approximate percent slope)?

80% for approximately 4 acres

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on landform shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards*

State Soil Survey # and Name	Soil Texture	% Slope Phase	Proposal Acres	Mass Wasting Potential	Erosion Potential
1955: Elwell-Olomount Complex	**Silt Loam, Gravelly Loam**	**3-30%**	**25**	**Insignificant**	**Low**
1956: Elwell-Olemount-Rock Outcrop Complex	**Silt Loam, Gravelly Loam**	**30-65%**	**35**	**Medium**	**Medium**
5660: Olemount-Elwell-Rock Outcrop Complex	**Silt Loam, Gravelly loam**	**3-30%**	**16.82**	**Medium**	**Medium**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) Surface indications:

None known

2) Is there evidence of natural slope failures in the sub-basin(s)?
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

The steep rocky slope within the southwest side of Unit #2 is on the margin of a large, thousands-of-years-old bedrock-involved landslide. The old landslide and surrounding area was logged 70+ years ago, and second-growth timber was harvested from most of the old landslide about 13 years ago. Roads were constructed across the old landslide for both earlier harvests without apparent stability consequences. Shallow rapid slope failures have occurred on inner gorge landforms within the sub-basins.

3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?
☒*No* ☐*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:

4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*

There are no inner gorge landforms in the immediate vicinity of the proposal, and the locally very steep slope in the southwest part of Unit #2 is in bedrock and shows no evidence of instability.

5) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.

All roads were designed to limit ground-based yarding distances to around 400 feet or less, or to access cable landing locations for areas requiring cable yarding. Ground-based operations will be harvested by shovel and are limited to areas with a 25% slope or less, with the steeper portions to be cable yarded. No-harvest buffers extend 100 feet from Type 4 streams and wetlands.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: **1.45 acres** *Approx. acreage new landings:* **1.75 acres** *Fill source:* **Native Material**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Some localized erosion could occur during road construction and log transportation activities. However, prudent road construction techniques and normal maintenance practices will minimize the amount of erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

About 1.8% of the proposal area will include new gravel roads, of which 32% will be abandoned post-harvest. See A-11-a above for details.

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

To control road-related erosion, road pioneering will not extend more than approximately 500 feet beyond completed construction, culverts will be installed concurrently with construction of the road subgrade, and culvert outlets will not terminate on unprotected soils. All exposed soils resulting from road construction will be revegetated the year the roads are constructed.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

No emissions are anticipated other than minor amounts of equipment exhaust and road dust created by log hauling activities. If burned, slash will be burned in adherence to WA State's smoke management program.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

If slash is burned, it will be burned in adherence to the State's Smoke Management Program.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

a) Downstream water bodies:

Proposal areas in sub-basin 6 (67% of proposal) drain approximately one mile west to Menzel Lake. Proposal areas in sub-basin 9 (33%) drain approximately 0.5 miles east to Worthy Creek.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Wetland	**B**	**3**	**100**
Unnamed Stream	**4**	**2**	**100**
Unnamed Stream	**5**	**2**	**None**

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

• All riparian and wetland buffers are no-harvest buffers.

• All wetlands have buffers averaging 100 feet.

• Roads were established to minimize construction and disturbance.

• The proposed road right-of-way in Unit #1 comes to within 50 feet of a small wetland internal to the unit. The approximately 0.22 acres that would otherwise have been considered as a wetland buffer have been replaced with equal acreage extending the buffer around the rest of the wetland.

• Type 4 streams have 100-foot buffers.

• Heavy equipment will be excluded 30 feet from either side of any Type 5 stream and directional felling away from the streams will be applied as practical.

• All existing road through RMZs and WMZs will be constructed to ensure ditchwater and runoff will not enter or otherwise adversely affect water quality or RMZ/WMZ function. Mitigative measures such as straw bales, silt fencing, rock-lined ditches, and sediment traps will be installed/constructed as necessary.

• Also see A.11.a. and B.5.d.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):

See B.3.a.1.c.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No material will be placed in or removed from surface water or wetlands through this proposal.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☒*No* ☐*Yes, description:*

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

	Sub Basin 6 (67% of proposal)		*Sub Basin 9 (33% of proposal)*	
Surface Erosion Potential	**High**	**6%**	**High**	**1%**
	Medium	**55%**	**Medium**	**63%**
	Low	**30%**	**Low**	**34%**
	Insignificant	**0%**	**Insignificant**	**0%**
	No Data – N/A	**9%**	**No Data – N/A**	**2%**
Mass Wasting Potential	**High**	**3%**	**High**	**0%**
	Medium	**35%**	**Medium**	**51%**
	Low	**0%**	**Low**	**13%**
	Insignificant	**61%**	**Insignificant**	**35%**
	No Data – N/A	**1%**	**No Data – N/A**	**1%**

Soils within the proposed units are classified as having a Low to Medium surface erosion potential and an Insignificant to Medium mass wasting potential. Given the buffers around all wetlands and typed streams, cable yarding requirements, and ground-based equipment

specifications, there is little to no anticipated potential for eroded materials to enter surface waters.

8) *Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?*
☒*No* ☐*Yes, describe changes and possible causes:*

9) *Could this proposal affect water quality based on the answers to the questions 1-8 above?*
☒*No* ☐*Yes, explain:*

10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)?*

3.7 for the Pilchuck River WAU
5.6 for Sub-basin 6
3.6 for Sub-basin 9

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

11) *Is the proposal within a significant rain-on-snow (ROS) zone? If not,* ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☒*No* ☐*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☒*No* ☐*Yes, describe observations:*

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*

This proposal is located in the rain-dominated portions of the Pilchuck Mountain WAU and therefore should have a minimal potential for impact on peak flows. Type 4 riparian and wetland buffers averaging 100 feet are established. Prudent road-building techniques will be followed. Refer also to B-3-a-1-c and B-3-a-2 above.

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☒*No* ☐*Yes, possible impacts:*

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

Refer to B-3-a-1-c above.

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Channeling water through ditches and culverts emptying out onto the forest floor will increase surface saturation in localized areas, but is not expected to increase ground water.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Small amounts of oil and other lubricants could be discharged inadvertently as a result of heavy equipment use. No lubricants will be disposed of onsite.

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☒*No* ☐*Yes, describe:*

a) *Note protection measures, if any.*

Refer to B-3-a-1-c above.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Runoff from the road surfaces will be collected in ditches and diverted to stable areas on the forest floor through the uses of ditches, culverts, and energy dissipaters.

2) Could waste materials enter ground or surface waters? If so, generally describe.

a) *Note protection measures, if any.*

It is not anticipated that waste material will enter ground or surface water as a result of this proposal.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

On roads: Constructed ditches, cross-drain culverts, drain dips, and water bars will be used to control runoff. Straw, grass seeding, or other appropriate methods may be used on any soil exposed cut and fill slopes during the course of this proposal in order to prevent sediment movement. Roads and landings will be crowned to avoid water accumulation. Falling and yarding away from all seasonal streams will be applied where feasible. All activities associated with this proposal will meet or exceed Forest Practices standards and will follow the Habitat Conservation Plan.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☒*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☐*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☒*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☒*salal,* ☐*other:*
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

The proposal will remove second-growth conifer and hardwood trees on approximately 76 gross acres and will be replaced with a planted mixed conifer stand. Approximately 93% of the trees per acre as calculated from DNR FRIS data will be removed from the regeneration harvest area. Approximately 649 legacy retention trees, representing 7% of the stem count greater than 12 inches diameter at breast height (dbh) will be left both scattered and clumped between the two units. Some alteration of shrubs and ground vegetation may occur during the course of harvest activity.

1) *Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")*

Unit #1: To the northwest beyond the riparian buffer is a mixed conifer stand planted in 1997. To the northeast is a stand similar to that of Unit #1. To the southeast is a mixed conifer stand planted in 1991. And to the south and west is a mixed conifer stand planted in 1984.

Unit #2: To the northwest is a mixed conifer stand planted in 1991. To the north is a stand similar to that of Unit #2. To the east is a mixed conifer stand planted in 2002. To the southeast and southwest is a mixed conifer stand planted in 1991, to the west is a strip of timber similar to that of Unit #2.

2) *Retention tree plan:*

A total of 649 legacy trees are to be retained within the proposal, representing 8.3 trees per acre for Unit #1 (359 total) and 8.8 trees per acre for Unit #2 (290 total). Leave tree numbers were determined per unit using 7% of the stem count greater than 12" dbh according to DNR FRIS data. As a rule, trees selected for retention are in the dominant or co-dominant crown classes, contain structural characteristics important to wildlife, and/or show wind firmness. Leave tree clumps were preferred to provide more wind-stability.

c. List threatened or endangered *plant* species known to be on or near the site.

None Found in Database Search of DNR's TRAX system.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Legacy retention trees will be left on site in both clumped and scattered patterns (see B-4-b-2 above). Conifer seedlings (Douglas-fir and western redcedar at around 360 stems/acre) will be planted within two years of the completion of the proposal. Soils exposed due to road construction will be grass-seeded.

5. Animal

a. Circle or check any birds, animals, *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☐hawk, ☐heron, ☐eagle, ☐songbirds, ☐*pigeon,* ☒other: **pileated woodpecker, downy woodpecker**
mammals: ☒deer, ☒bear, ☐elk, ☐beaver, ☒other: c**ougar**
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

Marbled murrelet presence detections were made in 1997 and 1998 within 0.1 miles of the proposal. The proposal area and forest stand to the northwest of the proposal were field evaluated for potential suitable murrelet habitat by a Region Wildlife Biologist. No potential murrelet nesting platforms were observed

within the proposal or immediately adjacent to the north/northwest (in the direction of the detections). On a small bench to the north of the stream, there is a patch of remnant old-growth Douglas-fir trees with numerous large limb platforms. The majority of these platforms are relatively bare, without moss or lichen. The total area containing platforms is estimated to be two to three acres in size, with enough platforms for there to be at least two platforms per acre. Another area of large Douglas-fir trees was observed in the approximate vicinity of the detections, but it was located at least 300 feet to the northwest of the patch mentioned above. That area was not thoroughly evaluated for platforms or size.

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*

All of Washington State is considered part of the Pacific flyway. No adverse impacts are anticipated as a result of this proposal.

d. Proposed measures to preserve or enhance wildlife, if any:

Legacy retention trees serve to maintain some varied wildlife habitat, and all buffers assist wildlife corridors. All activities associated with this proposal will meet or exceed Forest Practices standards and the Habitat Conservation Plan. See also B-1-h, B-3-a-1-b, B-3-a-1-c, B-3-d, B-4-b-2, and B-4-d.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

DOES NOT APPLY

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

DOES NOT APPLY

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

DOES NOT APPLY

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

There is minimal hazard from heavy equipment operations. There is a slight chance of hydraulic or oil spills from equipment operating on the site. There is also a potential fire hazard if operations occur in moderate to severe fire weather conditions during summer months.

1) Describe special emergency services that might be required.

DOES NOT APPLY

2) Proposed measures to reduce or control environmental health hazards, if any:

Safe operation of all equipment will be encouraged. Industrial restrictions and precaution levels regarding forest fire protection will be enforced. The timber purchaser will be required to have fire suppression equipment on site during the restricted fire season while harvest activity is ongoing.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Noise from road construction and harvest activity will be present in the immediate vicinity of this proposal during operations. Noise from log hauling will be present along the haul routes during operations.

3) Proposed measures to reduce or control noise impacts, if any:

None. Noise associated with harvest and road construction activity will be minimal anywhere but in the immediate vicinity of the proposal. Harvest activity and log hauling are historic activities in the area and noise should not be present above customary levels.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*

Site and adjacent property use is Forest Management.

b. Has the site been used for agriculture? If so, describe.

DOES NOT APPLY

c. Describe any structures on the site.

None

d. Will any structures be demolished? If so, what?

DOES NOT APPLY

e. What is the current zoning classification of the site?

Commercial Forest Land

f. What is the current comprehensive plan designation of the site?

Forestry

g. If applicable, what is the current shoreline master program designation of the site?

DOES NOT APPLY

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No

i. Approximately how many people would reside or work in the completed project?

None

j. Approximately how many people would the completed project displace?

None

k. Proposed measures to avoid or reduce displacement impacts, if any:

DOES NOT APPLY

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

This project is consistent with current comprehensive plans and zoning regulations.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

DOES NOT APPLY

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

DOES NOT APPLY

c. Proposed measures to reduce or control housing impacts, if any:

DOES NOT APPLY

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

DOES NOT APPLY

b. What views in the immediate vicinity would be altered or obstructed?

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☐*No* ☒*Yes, viewing location:*

There is a residence located approximately 0.8 mi. to the west/ northwest of the western edge of Unit #1 for which approximately five acres of the sale may be visible.

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☒*No* ☐*Yes, scenic corridor name:*

3) How will this proposal affect any views described in 1) or 2) above?

Approximately five acres along the western edge of Unit #1 may be visible to a residence to the west/ northwest. Given the small acreage visible, that the distance is nearly a mile away, that the trees immediately below the proposal are actively growing 30-year-old trees, and that the residence is located quite a bit lower in elevation, there is no anticipated significant impact on the view.

c. Proposed measures to reduce or control aesthetic impacts, if any:

No aesthetic impacts are anticipated.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

DOES NOT APPLY

b. Could light or glare from the finished project be a safety hazard or interfere with views?

DOES NOT APPLY

c. What existing off-site sources of light or glare may affect your proposal?

DOES NOT APPLY

d. Proposed measures to reduce or control light and glare impacts, if any:

DOES NOT APPLY

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

No designated recreational opportunities currently exist. Informal use may include horseback riding, bicycling, hiking, hunting, or camping.

b. Would the proposed project displace any existing recreational uses? If so, describe:

Informal recreational use may be limited during the course of operations due to safety/security concerns. No permanent displacement of existing use will occur as a result of this proposal.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None. No permanent displacement of existing use will occur as a result of this proposal.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None known

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None known

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

DOES NOT APPLY

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The proposal is accessed from Menzel Lake Road southeast of Granite Falls. See A-12-b.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

No such indication

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No

c. How many parking spaces would the completed project have? How many would the project eliminate?

None

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No

1) How does this proposal impact the overall transportation system/circulation in the surrounding area?

Apart from log hauling traffic during the course of operations, this proposal will have no impact on the overall transportation system in the surrounding area.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

0.01 trips per day (average of four trips a year) for management purposes, for the first 5-10 years after the completion of the proposal.

g. Proposed measures to reduce or control transportation impacts, if any:

Safe vehicle operation will be encouraged.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No

b. Proposed measures to reduce or control direct impacts on public services, if any.

Access will be restricted as needed during periods of extreme fire danger.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

DOES NOT APPLY

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity that might be needed.

DOES NOT APPLY

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: _____

Date: _____
Title

Reviewed by:_____

Date:_____
Title

Approved by:_____

Date:_____
Title